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17. ABSTRACT (MAX. 250 WORDS)

Statistical data was compiled from a detailed study in one elementary school system of class compositions, distributions of abilities, and achievement by races. Procedures used in carrying out the study and making the analyses are outlined. All of the statistical data is summarized in a series of tables.

Based on this data, several conclusions can be drawn. First, Negro and white children are almost uniformly distributed throughout each class and grade. Secondly, the mean intelligence score of Negro children is 12.9 points below that of white children, although the difference is less in second and third grades. The range of intelligence mean scores suggests that there is a consistency of grouping practices. Finally, the achievement levels of both Negro and white children appears to be rising. The difference in mean achievement levels continues to favor white children, but if initial socio-economic factors are compensated for, levels may be expected to become equal

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REPORT

ON

GROUPING PRACTICES

AND

ACHIEVEMENT

1963

ED001404

Greenburgh School District No. 8
475 W. Hartsdale Avenue
Hartsdale, New York

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INTRODUCTION

In 1960 the New York University team made a detailed study of class co[illegible] sitions and distribution of abilities and achievement by races. These studie[illegible] been continued for 1962-63 giving comparable figures and data over a period o[illegible] successive years and providing an opportunity for numerous comparisons. The [illegible] presented in this report serve to supplement the "Report on Achievement and R[illegible] mendations" presented earlier.

DEFINITIONS

MEAN (M)

That point in the range of total scores above and below which there i[illegible] actly equal number of units of de iation. Thus, if one person's score d[illegible] viates ten points above the mean it must be balanced by another person's which is ten points below the mean or by a combination of two or more sc[illegible] below the mean which total ten. A measure of central tendency.

MEDIAN (Md)

That point in the range of total scores above and below which there is a[illegible] actly equpa number of scores. Another measure of central tendency which not take into consideration the deviation of the scores.

UPPER QUARTILE (Q^1)

That point in the range of total scores above which 25% of the class ha[illegible]

PROCEDURES USED IN MAKING ANALYSES

Metropolitan Achievement Tests were administered to grade 2-6 in May, 19[illegible] Sub-test grade equivalent scores were recorded on individual cards and batte[illegible] medians scores were calculated. Individual cards were sorted by class sectio[illegible] by sex, and by race. Intelligence scores and other data were recorded on the dividual cards.

Intelligence scores and grade level battery median scores were tabulated sections, by races and by totals for each section and for each grade. Class medians, and quartiles for battery median scores were also calculated.

Racial and sex distribution means were calculated for each section and f[illegible] each grade.

Gains and losses of pupils from one year to the next were tallied by race, sex and totals.

All data developed were compared with similar data developed by N.Y.U. [illegible] the years 1961 and 1962.

STATISTICAL DATA BY GRADE LEVELS

The following tables summarize all of the data collected and analyzed f[illegible] each grade 2-6 included in this study.

I. STATISTICAL STUDY OF SECOND GRADE 1962-63

		White	Negro	Total
No. of Pupils in 1st grade not entering second:	Boys	9	4	13
	Girls	13	3	16
	Total	22	7	29
No. of Pupils in 2nd grade not in 1st grade:	Boys	10	9	19
	Girls	10	5	15
	Total	20	14	34

	White		Negro		Total	Total	Mean I. Q.			Mean Ach.		
Section	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Total
2o1	8	8	4	4	16	8	106.	105	105.9	3.41	2.75	3.18
2o	6	6	5	6	12	11	107.9	96.9	103.2	3.50	2.45	3.02
2F	8	8	2	4	16	6	105.	99.1	102.7	2.81	2.17	2.70
2N	6	8	4	4	14	8	110.6	95	104.6	2.91	2.31	2.90
2Ra	8	6	4	5	14	9	106.4	101.1	104.5	3.25	2.53	2.94
2A	8	9	5	3	17	8	109.	106.2	108.7	3.16	2.62	2.99
2D	7	8	4	4	15	8	108.3	95	103.2	2.91	2.39	2.75
2Di	7	8	6	4	15	10	109.5	104.7	107.7	3.82	2.85	3.43
2R	6	8	6	4	14	10	112.5	106.5	110.0	3.53	2.32	3.04
2C	9	6	5	5	15	10	113.5	98.9	108.9	3.58	1.75	2.85
Mean	7.8	8.0	5.0	4.8	15.3	9.3	108.8	101.0	105.8	3.29	2.44	2.97
%	30.9	31.8	19.8	18.2	62.7	37.3						

COMPARISON OF MEAN DATA FOR YEARS INDICATED

	White		Negro		Total	Total	I. Q.s			Achievement		
	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Total
Grade 2 1962-63	7.8	8.0	5.0	4.8	15.3	9.3	108.8	101.	105.8	3.29	2.44	2.97
Grade 2 1961-62	- -	- -	- -	- -	13	10	113	99	107	3.2	2.3	2.9
Grade 2 1960-61	9.0	7.6	4.8	2.9	16.6	7.7	115	100	109.4	3.0	2.1	2.8

II. STATISTICAL STUDY OF THIRD GRADE 1962-63

		White	Negro	Total
No. of Pupils in 2nd grade not entering 3rd:	Boys	12	8	20
	Girls	9	6	15
	Total	21	14	35
No. of Pupils in 3rd grade not in 2nd:	Boys	8	5	13
	Girls	6	6	12
	Total	14	11	25

Section	White Boys	White Girls	Negro Boys	Negro Girls	Total White	Total Negro	MEAN I.Q. White	MEAN I.Q. Negro	MEAN I.Q. Total	MEAN ACH. White	MEAN ACH. Negro	MEAN ACH. Total
3R	9	8	4	4	17	8	103.1	102.5	102.9	3.47	3.12	3.37
3K	7	6	5	5	13	10	113.6	99.5	107.7	5.40	3.90	4.75
3E	5	7	6	5	12	11	118.3	97.5	106.6	5.62	3.61	4.66
3G	6	9	5	4	15	9	102.5	96.9	100.0	3.88	3.25	3.75
3V	7	7	2	4	14	6	107.8	104.1	101.8	3.75	3.17	3.51
3 O	6	6	4	6	12	10	114.8	113.0	113.6	4.06	3.95	4.01
3En	7	4	6	6	11	12	122.5	104.3	112.9	5.38	3.25	4.29
3M	10	6	6	4	16	10	108.9	100.5	103.8	4.72	3.30	4.17
3S	10	3	4	7	13	11	109.8	99.8	105.3	4.52	3.61	4.08
Mean	7.9	6.7	5.2	5.5	14.2	10.2	110.2	101.1	106.6	4.46	3.49	4.09
%	31.9	26.7	20.0	21.4	58.6	41.4						

COMPARISON OF MEAN DATA FOR YEARS INDICATED

	White Boys	White Girls	Negro Boys	Negro Girls	Total White	Total Negro	MEAN I. Q. White	MEAN I. Q. Negro	MEAN I. Q. Total	ACH. White	ACH. Negro	ACH. Total
Grade 3 1962-63	7.9	6.7	5.2	5.5	14.2	10.2	110.2	101.1	106.6	4.46	3.49	4.09
1961-62	- -	- -	- -	- -	16.0	8.0	112	94	106	4.6	3.6	4.3
1960-6_	7.6	7.6	2.9	4.5	15.2	7.4	108.5	93.7	103.4	4.2	3.2	3.8

COMPARISON OF MEAN DATA FOR SAME* CLASS 1961-63

	White Boys	White Girls	Negro Boys	Negro Girls	Total White	Total Negro	I. Q.s White	I. Q.s Negro	I. Q.s Total	Achievement White	Achievement Negro	Achievement Total
Grade 3 1962-63	7.9	6.7	5.2	5.5	14.2	10.2	110.2	101.1	106.6	4.46	3.49	4.09
Grade 2 1961-62	- -	- -	- -	- -	13	10	113	99	107	3.2	2.3	2.9
Grade 1 196061	7.2	7.7	4.9	4.1	14.9	9	110.5	96.4	106.0	2.3	2.0	2.3

STATISTICAL STUDY OF FOURTH GRADE 1962-63

		White	Negro	Total
No. of pupils in 3rd grade not entering 4th;	Boys	9	4	13
	Girls	9	4	13
	Total	18	8	26
No. of pupils in 4th grade not in 3rd grade:	Boys	8	4	12
	Girls	6	4	10
	Total	14	8	22

Section	White Boys	White Girls	Negro Boys	Negro Girls	Total White	Total Negro	MEAN I. Q.s White	MEAN I. Q.s Negro	MEAN I. Q.s Total	MEAN ACH. White	MEAN ACH. Negro	MEAN ACH. Total
[illegible]	11	5	2	5	16	7	111.5	91.8	105.5	5.95	4.05	5.4
5M	7	7	5	4	14	9	115.8	94.3	107.3	5.18	4.55	4.95
4S	8	6	5	3	14	8	117.9	91.9	106.8	6.45	4.85	5.79
4G	9	9	4	3	18	7	114.7	92.5	107.9	6.35	4.45	5.83
4Be	9	9	4	2	18	6	110.7	100.5	108.4	5.65	4.08	5.27
4T	8	8	4	5	16	9	108.2	101.8	106.1	5.35	4.47	4.98
4C	9	7	5	4	16	9	119.7	96.9	112.0	6.75	4.41	6.00
4V	9	7	3	3	16	6	119.0	94.1	110.0	5.78	4.30	5.39
4Ba	5	8	4	5	13	9	114.4	99.4	108.7	6.17	4.41	5.41
Mean	8.83	7.83	4.5	4.27	16.16	8.27	114.1	95.8	107.5	5.97	4.43	5.44
%	35.5	31.3	17.1	16.1	66.8	33.2						

COMPARISON OF MEAN DATA FOR YEARS INDICATED

	White Boys	White Girls	Negro Boys	Negro Girls	Total White	Total Negro	I.Q.s White	I.Q.s Negro	I.Q.s Total	ACH. White	ACH. Negro	ACH. Total
Grade 4 [illegible]	8.83	7.83	4.5	4.27	16.16	8.27	114.1	95.8	107.5	5.97	4.43	5.44
Grade 4 1961-62	---	---	---	---	14.0	9.0	111	93	105	5.7	4.3	5.2
Grade 4 1960-61	10	6.8	4.8	3.8	16.8	8.6	111.5	97.3	106.2	5.2	4.1	4.9

COMPARATIVE DATA FOR SAME* CLASS 1961-63

	White Boys	White Girls	Negro Boys	Negro Girls	Total White	Total Negro	I. Q.s White	I. Q.s Negro	I. Q.s Total	Achievement White	Achievement Negro	Achievement Total
Means Gr 4 [illegible] 1962-63	8.83	7.83	4.5	4.27	16.16	8.27	114.1	95.8	107.5	5.97	4.43	5.2
Means Gr. 3 1961-62	---	---	---	---	16.	8.	112.	94	106	4.6	3.6	4.3
Means Gr. 2 1960-61	9.0	7.6	4.8	2.9	16.6	7.7	115	100	109.4	3.0	2.1	2.8

* Chronological class - mobility factors not considered.

IV. STATISTICAL STUDY OF FIFTH GRADE - 1962-63

		White	Negro	Total
No. of pupils in 4th grade not entering 5th	Boys	3	2	5
	Girls	6	6	12
	Total	9	8	17

		White	Negro	Total
No. of pupils in 5th grade not in 4th grade	Boys	6	1	7
	Girls	12	6	18
	Total	18	7	25

	White		Negro		Total	Total	MEAN I. Q.s			MEAN ACH.		
Section	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Total
5S	7	7	3	6	14	9	115.7	99.7	109.4	7.71	6.30	7.07
5B	8	9	3	5	17	8	115.4	101.8	111.0	7.06	5.87	6.54
5C1	8	8	3	4	16	7	115.1	97.5	110.7	7.75	5.46	7.00
5G	7	9	3	5	16	8	108.2	92.5	103.9	7.15	5.19	6.96
5M	6	8	3	6	14	9	114.6	101.4	109.4	6.78	5.57	6.34
5C	8	7	4	6	15	10	112.5	103.5	108.1	6.85	6.00	6.55
5W	7	7	3	7	14	10	107.5	99.1	104.2	6.07	5.30	5.96
5Be	8	10	3	4	18	7	115.3	95.8	110.0	6.94	5.68	6.47
Mean	7.87	8.61	3.0	5.87	16.12	8.5	113.7	99.1	108.3	7.07	5.62	6.54
%	30.7	33.9	13.0	22.4	64.6	35.4						

COMPARISON OF MEAN DATA FOR YEARS INDICATED

	White		Negro		Total	Total	I. Q.s			ACH.		
	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Total
Grade 5 1962-63	7.87	8.61	3.0	5.87	16.12	8.5	113.7	99.1	108.3	7.07	5.62	6.54
Grade 5 1961-62	---	---	---	---	15.0	10.0	115	99	108	6.9	4.9	6.2
Grade 5 1960-61	5.7	6.0	3.9	5.7	11.7	9.6	109.9	97.4	103.9	6.0	5.1	5.6

COMPARATIVE DATA FOR SAME* CLASS 1961-1963

	White		Negro		Total	Total	I. Q.s			Achievement		
	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Total
Means Grade 5 1963	7.87	8.61	3.0	5.87	16.12	8.5	113.7	99.1	108.3	7.07	5.62	6.54
Means Grade 4 1962	---	---	---	---	14.0	9.0	111	93.	105	5.7	4.3	5.2
Means Grade 3 1961	7.6	7.6	2.9	4.5	15.2	7.4	108.5	93.7	103.4	4.2	3.2	3.8

V. STATISTICAL STUDY OF SIXTH GRADE - 1962-63.

		White	Negro	Total
No. of pupils in 5th grade not entering 6th	Boys	8	3	11
	Girls	9	6	15
	Total	17	9	26

		White	Negro	Total
No. of pupils in 6th grade not in 5th grade	Boys	9	3	12
	Girls	6	5	11
	Total	15	8	23

	White		Negro		Total	Total	MEAN I. Q.			MEAN ACH.		
Section	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Total
6G	9	3	6	5	12	11	114	97	106.8	8.0	6.48	7.29
6F	9	7	6	3	16	9	119.7	98.6	112.5	8.34	5.81	7.43
6K	7	7	5	5	14	10	121.6	90.9	109.6	7.83	6.1	7.33
6S	9	6	5	4	15	9	112.5	101.9	108.3	8.03	5.95	7.41
6A	9	5	6	4	14	10	110	97.5	10 47	7.86	6.0	6.87
6T	10	4	5	5	14	10	111.6	97.5	101.1	7.68	5.72	6.85
6P	9	5	6	4	14	10	106.3	100.0	103.2	7.68	6.69	7.08
6R	9	6	3	4	15	7	116.5	100.0	113.2	7.95	5.89	7.25
Mean	8.99	5.07	5.02	4.06	14.009	9.05	113.8	99.0	108.1	7.95	6.04	7.22
%	37.4	22.6	22.1	17.9	60	40						

COMPARISON OF MEAN DATA FOR YEARS INDICATED

	White		Negro		Total	Total	MEDIAN I. Q.			MEDIAN ACH.		
	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Total
Grade6 1962-3	8.99	5.07	5.02	4.06	14.01	9.05	113.8	99.0	108.1	7.95	6.04	7.22
Grade 6 1961-62					14.0	10.0	108.0	95.0	104.0	7.4	6.2	6.8
Grade 6 1960-61	6.9	4.4	4.7	3.7	11.3	8.4	108.3	95.6	104.5	Not available		

COMPARATIVE DATA FOR SAME* CLASS 1961-63

	White Negro		Negro		Total	Total	I. Q.s			Achievement		
	Boys	Girls	Boys	Girls	White	Negro	White	Negro	Total	White	Negro	Tot.
Means Grade 6-1963	8.99	5.07	5.02	4.06	14.01	9.05	113.8	99.0	108.1	7.95	6.04	7.22
Means Grade 5-1962					15.0	10.0	115.0	99.0	108.0	6.9	4.9	6.2
Mean Grade 4-1961	10.0	6.8	4.8	3.8	16.8	8.6	111.5	97.3	106.2	5.	4.1	4.9

VI. SUMMARY OF GRADE DISTRIBUTIONS

	White		Negro		Total	Total	
	Boys	Girls	Boys	Girls	White	Negro	% Negro to White
Grade 2	7.8	8.0	5.0	4.8	15.3	9.3	37.3
Grade 3	7.9	6.7	5.2	5.5	14.2	10.2	41.4
Grade 4	8.83	7.83	4.5	4.27	16.16	8.27	33.2
Grade 5	7.87	8.61	3.0	5.87	16.12	8.5	35.4
Grade 6	8.99	5.07	5.02	4.06	14.01	9.05	40

Racial distribution on all grade levels and in all class sections

INTERPRETATION OF STATISTICAL DATA

1. RACIAL DISTRIBUTION

Children are well distributed racially in all grades and in all sections (It should be noted these are end of the year distributions which differ from beginning distributions due to mobility factors). The average mean distribution in grades 2-6 is: White Boys 8.3, White girls 7.2, total White 15.2; Negro Boys 4.5, Negro Girls 4 9, Total Negro 9.1. In 1961 the comparative figures were: White Boys 7.7, White Girls 6.7, Total White 14.4 Negro Boys 4.3, Negro Girls 4.1, Total Negro 8.4.

2. INTELLIGENCE SCORES

The difference of the average of the mean intelligence scores of Negro and White pupils is 12.9. This figure compares and is consistent with the 12-15 point difference determined in 1961.

The average mean intelligence score for Negro children is 99.2, and for white children 112.1 and for the total population 107.3. The comparable figures in 1961 were: Negro children 96.7, White children 109.0 and total population 105.6. These differences are within the standard error of the group tests and do not necessarily have any significance.

The Mean I.Q. of each class section on each grade level is within the acceptable ± range according to the district grouping policy. The difference between mean I.Q.'s of Negro and white children in each section on all grade levels show a reasonable consistency. In 1961 there were wide variations in these measures indicating an inconsistency in grouping procedures.

3. ACHIEVEMENT

Mean achievement scores were determined for white and Negro children and compared with 1961 results.

	White		Negro		Difference	
Grade	1961	1963	1961	1963	1961	1963
2	3.0	3.3	2.1	2.4	.9	.9
3	4.2	4.5	3.2	3.5	1.0	1.0
4	5.2	6.0	4.1	4.4	1.1	1.6
5	5.6	7.1	5.1	5.6	.5	1.5
6	5.7	7.9	3.7	6.0	2.0	1.9
(1960 scores for 6th)						

The present data continues to show a fairly constant differential in favor of the white children. It should be noted that the mean achievement of both groups has advanced.

An analysis was made of the amount of change in means in grades where comparable data was available.

AMOUNT OF CHANGE

	WHITE			NEGRO			DIFFERENCE		
Grade	60 to 61	61 to 62	62 to 63	60 to 61	61 to 62	62 to 63	60 to 61	61 to 62	62to63
2 - 3	+1.6	+1.6	+1.3	+1.0	+1.5	+1.2	+.6	+.1	+.1
3 - 4	+1.4	+1.5	+1.4	+1.1	+1.1	+ .8	+.3	+.4	+.6
4 - 5	+ .9	+1.7	+2.4	+1.0	+ .8	+1.3	-.1	+.9	+1.1
5 - 6	N. A.	1.4	1.1	N. A.	1.1	1.1	N. A.	+.3	0

These data show that the relative progress of Negro and white children in third grade is almost equal; in fourth and fifth grades the relative progress of white children is significantly greater and in sixth grade the relative progress is substantially equal. It should be noted that the average gain of both white and Negro children is greater than 1 year.

MOBILITY

Mobility data was compiled to determine the movement of pupils from one testing period to the next. The mobility factor affects both white and Negro populations. The net losses were slightly larger than the net gains: 131, 129 -- White children leaving totalled 62 and entering 63. Negro children leaving totalled 69 and entering 66.

CONCLUSIONS

1. Negro and white children are almost uniformly distributed throughout each class and grade.

2. The mean intelligence score of Negro children is 12.9 points below the mean intelligence score of the white children. However, in second and third grades this difference is less.

An analysis of the range of intelligence mean scores by sections suggest that there is a consistency of grouping practices.

3. The achievement levels of both Negro and white children is rising. The difference in mean achievement levels continues to be in favor of white children. However, the annual gain of Negro and white children is becoming more nearly equal. This suggests that if initial socio-economic factors are compensated for, achievement levels may be expected to become equal.

Respectfully submitted

George E. Fitch

Comparison of Data developed in "A REPORT AND RECOMMENDATIONS ON ACHIEVEMENT TEST RESULTS - 1963" and "GROUPING PRACTICES AND ACHIEVEMENT REPORT-1963"

Since the same test scores and data were the basic information analyzed in both the above reports, it is possible to make a further comparison which is not contained in either. The following table shows a comparison of 1963 quartiles and medians with those of 1961.

COMPARISON OF QUARTILE STANDINGS (Total Battery) BY GRADES FOR YEARS INDICATED

		Q_1	Md	Q_3
Grade 6 -	1958-59	7.8	6.3	5.0
	1962-63	8.57	7.26	5.56
	Change	+ .77	+ .96	+ .56
Grade 5 -	1958-59	6.8	5.7	4.8
	1962-63	7.7	6.76	5.05
	Change	+ .9	+1.06	+ .25
Grade 4 -	1958-59	5.9	4.8	4.0
	1962-63	6.64	5.47	4.38
	Change	+ .74	+ .67	+ .38
Grade 3 -	1958-59	4.60	4.0	3.10
	1962-63	4.90	3.94	3.15
	Change	+ .30	- .06	+ .05

Grades 2 and 1 were not included in the 1958-59 analysis.

*Chronological class - mobility factors not considered.